

Uehara et al. (hereinafter "Uehara"). In view of the following remarks, reconsideration of these rejections is respectfully requested.

A) Rejection of claim 1.

Claim 1 is directed to an industrial truck having a plurality of wheels, a load lifting system, and a drive system. The truck also includes a stabilizing device comprising a plurality of wheel load sensors, with each load sensor connected to an individual wheel and configured to measure a wheel load. The load sensors are connected to a monitoring device configured to control or regulate the load lifting system and/or the drive system of the truck based on the wheel load sensor data. At least two wheels of the truck have a speed-of-rotation sensor connected to the monitoring device. At least one wheel on the front axle of the truck has a wheel bearing with an integrated wheel load sensor.

Avitan discloses a stabilization system having a rear steer wheel 34 with an annular weight load transducer 86 that generates a signal indicative of the axial weight load on the rear wheel. While the Examiner notes in paragraph 3 of the Office Action that Avitan does not disclose wheel load sensors, the Examiner relies upon Rath for this teaching.

Rath discloses a brake system for a heavy-duty vehicle which continuously measures parameters characteristic of the state of the vehicle to determine whether or not the stopping distance to be expected will be longer than a predetermined rated stopping distance (Rath at Abstract; column 1, lines 58-64; and column 3, lines 30-46). Load sensors, such as an axle load sensor 28, can be mounted on the axles of the vehicle to detect the loading condition of the truck (Rath at column 2, lines 56-59). This loading condition (axle load) is one of several parameters which can be input into an equation to calculate the actual stopping distance X_{ist} to be expected given the state of the various parameters (Rath at column 3, lines 30-46; column 3, lines 53-62; and column 4, lines 7-24).

While in paragraph 3 of the Office Action the Examiner notes that the Avitan and Rath combination does not disclose a speed-of-rotation sensor as claimed in claim 1, the Examiner relies upon Wiegardt for this disclosure. Wiegardt discloses a tractor with a hitch for pulling a ground-engaging implement, such as a moldboard plow or chisel plow (Wiegardt at column 3, lines 23-27). A control system senses operating parameters, such as wheel slip, engine speed, draft force, and implement or rack-shaft position, and derives an error signal from these parameters. This determined error signal can then be applied to a control valve to move the plow to reduce the error signal (Wiegardt at Abstract). One of the parameters used in the Wiegardt device is the wheel speed detected by a rotation speed sensor 62 on the rear axle 22 of the drive wheel 16. This wheel speed can be used to determine a wheel slip value for the tractor (column 6, line 55 to column 7, line 14). Based upon the measured parameters, the depth of the plow can be adjusted (Wiegardt at column 12, line 36 to column 13, line 26).

While the Examiner notes in paragraph 3 of the Office Action that the Avitan, Rath, and Wiegardt combination does not disclose the integrated wheel load sensor claimed in claim 1, the Examiner relies upon Uehara for this disclosure. Uehara discloses a vehicle load measuring apparatus to obtain an accurate total weight of a vehicle. The vehicle load measuring apparatus includes load sensors 7a, 7b attached to vehicle members. The load sensor 7a on a front wheel is inserted into an axial hole of a shackle pin 34 and the load sensor 7b for the rear wheel is inserted into a horizontal axis of a trunnion shaft 3 as shown in Figs. 6 and 7 (Uehara at column 4, lines 50-60).

Applicants respectfully disagree with the Examiner's rejections.

Applicants believe that the Examiner is simply selecting bits and pieces from the various cited references using Applicants' application as a template to take the selected pieces and recombine them in a manner not taught by the references themselves. Applicants

do not contend that they are the first to invent wheel load sensors or speed-of-rotation sensors or the specific individual components claimed in claim 1. However, it is the claimed combination of these components which Applicants have developed and which provides Applicants' invention with the advantages over the prior art discussed in the pending specification. While the cited references may disclose one or more of the specific components of Applicants' invention, there is no teaching or suggestion in the cited references to combine these components as the Applicants have done to arrive at the claimed invention. For example, Avitan is directed to a stabilization system for load handling equipment having a mast assembly 18 and a load engaging carriage 20 having a pair of forks 22 to carry a load 24. The Examiner contends that it would be obvious to one of ordinary skill in the art to modify the Avitan truck by incorporating the load sensors (e.g., the axle load sensor 28) of the Rath brake system. Applicants respectfully disagree. The sensed axle load of the Rath brake system is simply one parameter used to calculate the actual stopping distance X_{ist} of the Rath heavy-duty vehicle. There is no teaching or suggestion in Rath or Avitan to deconstruct the Rath braking system to remove the wheel load sensors and add them to an industrial truck outside of the Rath brake system. Additionally, the Wiegardt speed-of-rotation sensor is simply one component of an overall depth control system to control the depth of a ground-engaging implement, such as a plow, based on a series of processing inputs, which can include rear wheel velocity (WVEL) or SLIP. There is no teaching or suggestion in Avitan, Rath, or Wiegardt to deconstruct the Wiegardt plow-depth device to remove the speed sensor apart from the rest of the Wiegardt depth control device and incorporate the speed sensor as claimed in claim 1. Moreover, the load sensors 7a and 7b of the Uehara device are simply present to measure the total load or total weight of a vehicle and are not part of a stabilizing device, as in claim 1. If the Uehara load sensors were incorporated into the Avitan device as suggested by the Examiner, it would simply result in

the Avitan fork lift truck having load sensors to determine the total weight of the vehicle. It would not result in the stabilizing device as claimed in claim 1. Therefore, for all of the above reasons, claim 1 is not rendered obvious by the cited combination and is believed allowable over the cited combination and in condition for allowance. Reconsideration of the rejection of claim 1 is respectfully requested.

B) Rejections of claims 3, 5, 7, 8, 10-13, and 15.

Claims 3, 5, 7, 8, 10-13, and 15 depend either directly or indirectly from, and add further limitations to, claim 1. Since these claims depend from a claim believed to be in condition for allowance, these claims are also believed to be in condition for allowance. Additionally, with respect to claim 7, none of the cited references, either alone or in combination, fairly teaches or suggests that each speed-of-rotation sensor is integrated into a wheel bearing. With respect to claim 11, the cited combination does not fairly teach or suggest that the two wheels with the speed-of-rotation sensors are located on the same axle. Therefore, for all of the above reasons, claims 3, 5, 7, 8, 10-13, and 15 are also believed allowable over the cited combination.

II. Claims 2, 9, and 14.

Claims 2, 9, and 14 stand rejected over the Avitan, Rath, Wiegardt, and Uehara combination discussed above in further view of the teachings of U.S. Patent No. 4,520,443 to Yuki et al. (hereinafter "Yuki"). In view of the following remarks, reconsideration of these rejections is respectfully requested.

Yuki discloses a control device for an unloading mechanism for a truck. The Yuki device includes a load sensor 106 to detect the weight of a load carried by the truck in order to correct for horizontal positioning of the fork in accordance with the amount of bending of the upright and/or the fork due to the weight of the load (Yuki at column 7, lines 60-66). However, Yuki does not overcome the shortcomings discussed above with respect to

the Avitan, Rath, Wiegardt, and Uehara combination with respect to claim 1. Since claims 2, 9, and 14 depend from claim 1, claims 2, 9, and 14 are believed allowable for substantially the same reasons as discussed above with respect to claim 1.

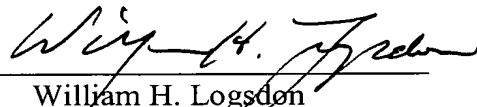
Conclusion

In view of the above remarks, reconsideration of the rejections and allowance of all of claims 1-3, 5, and 7-15 are respectfully requested.

Respectfully submitted,

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